

AMENDMENT

Please amend the application as follows:

In the claims:

Please replace claims 10-16 and 24 with amended claims 10-16 and 24 as follows:

E1
Sub
F1 } -- 10. (Amended) The method of claim 16 or claim 24, wherein the amount of the probe is detected prior to the contacting step.

11. (Amended) The method of claim 16 or claim 24, wherein the amount of the sample nucleic acid hybridized to the probe is detected after the completion of the contacting step.

12. (Amended) The method of claim 16 or claim 24, wherein both the amount of the probe and the amount of the sample hybridized to the probe are detected after the completion of the contacting step.

13. (Amended) The method of claim 16 or claim 24, wherein the sample nucleic acid and the probe are labeled with different labeling materials.

14. (Amended) The method of claim 16 or claim 24, wherein the value is indicated on a display.

15. (Amended) The method of claim 16 or claim 24, wherein the substrate on which each of a plurality of types of probes are immobilized at a given position comprises a biochip.

E2
Sub
F1 } 16. (Twice Amended) A method for detecting a degree of hybridization between a probe and a sample comprising a biopolymer, the method comprising

(a) providing a substrate on which each of a plurality of types of probes is separately immobilized on each different and separate predetermined position, wherein the probes are labeled with a first detectable label;

(b) providing a sample comprising a biopolymer, wherein the biopolymer is labeled with a second detectable label;

(c) contacting the sample with the probe;

(d) detecting an amount of the probe at each different and separate predetermined position of the substrate by detecting the first detectable label;

(e) detecting an amount of the sample biopolymer hybridized to the probe at each different and separate predetermined position of the substrate by detecting the second detectable label; and

(f) producing a value representing the degree of hybridization between the probe at each different and separate predetermined and the sample biopolymer by dividing the difference between the amount of the probe detected at each different and separate predetermined position and the amount of the sample biopolymer hybridized to the probe by the amount of the probe.

24. (Twice Amended) A method for detecting a degree of hybridization between an oligonucleotide probe immobilized onto an array and a sample nucleic acid, the method comprising

(a) providing a substrate on which each of a plurality of types of oligonucleotide probes is separately immobilized on each different and separate predetermined position to form an array, wherein the oligonucleotide probes are labeled with a first detectable label;

(b) providing a sample comprising a nucleic acid, wherein the nucleic acid is labeled with a second detectable label;

(c) contacting the sample with the probe;

(d) detecting an amount of the probe at each different and separate predetermined position of the substrate by detecting the first detectable label;

(e) detecting an amount of the sample nucleic acid hybridized to the probe at each different and separate predetermined position of the substrate by detecting the second detectable label; and

Applicant : Yurino, et al.
Serial No. : 09/459,712
Filed : December 13, 1999
Page : 4

Attorney's Docket No.: 13452-004001 / PH-710US

3
630

(f) producing a value representing the degree of hybridization between the a probe at each different and separate predetermined position and a sample by dividing normalizing the difference between the amount of the probe detected at each different and separate predetermined position and the amount of the sample nucleic acid hybridized to the probe by with the amount of the probe.--
